

Testing Searle's Argument against Laws in the Social Sciences

Searle's theory of intentionality is a widely discussed account that few philosophical approaches can top in terms of impact. Its main arguments are relatively simple, yet wide-ranging. The theory has been quoted extensively outside of philosophy and serves as the foundation of articles and books in psychology, anthropology and sociology. An integral aspect of this theory is his remarks on the social sciences. They can be seen as an application of his theory in the real world.

In the conclusion of *Minds, Brains and Science*, Searle (1985: 82) writes that "the social sciences in general are about various aspects of intentionality." This strong claim serves to reject every other approach to the social sciences while asserting Searle's own greater theory of the mind, which in turn extends to society in general. It can be broken down to the claim that laws in the social sciences are simply impossible.

The scope of these assertions is, of course, much bigger. It lends a hand to interpretivist social sciences that do not rely on laws, but rather on understanding human actions. What Searle (1991a) calls the dispute between materialist and interpretivist traditions in the social science boils down to the well-known quarrel of quantitative and qualitative methods. Disqualifying the former might be the outcome of Searle's claims, although he does not seem to suggest it.

There is extensive literature discussing Searle's argument against social-scientific laws. What is not discussed is if his argument really tackles the social sciences, or if they indeed work in another way. This paper aims to close that gap. It will look into accounts brought forth by philosophers refuting claims similar to Searle's and ultimately look into actual research to find out if those accounts or Searle's theory are more compatible with the way science works.

This paper will first describe Searle's concept of the social science. In a second part, some common objections to Searle's argument will be raised and investigated. The third part will look into how the sciences, be they social or natural, actually work and a fourth part will test those claims on some actual research.

Searle's account of the problem of the social sciences and how to solve it is distributed over three papers and book chapters (1985, 1991a, 1991b). Parts of it were further developed in 1995's *The Construction of Social Reality*. Since that book deals primarily with how social phenomena come into existence and (mostly) leaves out the social sciences, it will be omitted from this summary.

Searle (1985: 75) states the problem as follows: *Why should there be laws of the behavior of molecules but not laws of the behavior of societies?*"It must be noted that those laws should be like the laws of physics and chemistry. The gas laws, for example, are reducible to the laws of statistical thermodynamics (Searle 1991b: 337).

Such laws of society would ultimately allow us to predict revolutions and wars. According to Searle (1985: 75/76), this would in turn mean that we had exact laws of the movement of the billions of particles involved in revolutions or wars. The higher-level laws would match and be grounded in the laws of the lower levels, that is the laws of molecules. But social phenomena, according to him, are not grounded in the movement of molecules (77). Unlike the gas laws, which are reducible to the laws of statistical thermodynamics, laws of revolutions are not reducible to laws of the movement of the involved particles (Searle 1991b: 337).

Social and psychological phenomena have, according to Searle, two peculiarities that make such a bridge between the lower and the higher level impossible:

First, the concept of the phenomena in part constitutes the phenomena (Searle 1985: 78, 1991a: 335/336, 339). A marriage is only a marriage if everyone involved believes it to be a marriage and agrees on what constitutes a marriage. Marriage is effectively self-referential, while, say, a neutron is not.

Second, social phenomena know no limits to their physical realization (Searle 1985: 78/79). Money can be made from clamshells, metal, paper, or even in a digital form as magnetic charges on a rotating disk. A wedding can be conducted in a church, on a beach, or even online.

Searle argues that those two peculiarities stem from the foundation of social phenomena in the mind. Since money has an indefinite number of forms, seeing money must have an indefinite number of neurophysiological realizations (Searle 1985: 80/81).

This, in turn, stems from the characteristics of what he calls “social facts”:

- First, they are self-referential. They contain mental representations that are self-referential (Searle 1991a: 341).
- Second, they have constitutive rules. Those rules do not only regulate, but in fact bring it into existence (Searle 1991a: 341).
- Third, they require collective intentionality. Involved persons have to cooperate and have matching intentions (Searle 1991a: 341/342)
- Fourth, they are permeated by language. Agents do need to have the appropriate vocabulary to have the relevant thoughts (Searle 1991a: 342/343).
- Fifth, they are not isolated but interdependent. Money presupposes a system of exchange for goods and services (Searle 1991a: 343).
- And finally, sixth, the acts are prime to the objects. The objects cannot exist without the relevant action (Searle 1991a: 343).

This leads to a pseudo-formal argument that Searle presents in (1985: 81-82) and which can be reconstructed as follows:

1. In order to have scientific laws, a systematic correlation between the higher and lower levels of a phenomenon is needed.
2. (hidden premise) For there to be such a systematic correlation, the phenomena in question cannot be physically open-ended.
3. Social phenomena are in large parts defined in terms of the psychological attitudes that people take.
4. (hidden premise) Those psychological attitudes are physically open-ended.
5. Therefore, social phenomena are physically open-ended.
6. Therefore, bridge principles between the social and the physical features of the world cannot exist.
7. Therefore, laws of the social sciences cannot exist.

The whole argument stems from the notion that “in explaining human behavior we need both a mentalistic and a neurophysiological level of explanation” (Searle 1991b: 335). Yet the argument only rejects laws that use both levels. A second argument turns against searching for laws in the neurophysiological realization of mental states except for concepts that are built into us from birth, such as Chomsky’s universal grammar (Searle 1985: 82):

1. Social phenomena are physically open-ended.
2. The possibilities of neurophysiological realizations of social phenomena are therefore infinite.
3. Therefore, concepts that are not built into us from birth cannot systematically correlate the mental and physical features.

So what exactly constitutes the social sciences?

Searle points to some of the features of the social sciences – or, more exactly, distinctions from the natural sciences – in *Intentionalistic Explanations* (Searle 1991a: 335-340). First, their explanations make reference to intentional causation. Its definition is given as

“For any events x and y , x and y are related by intentional causation if and only if either x causes y or y causes x , and either x or y is an intentional state and the term which is not an intentional state is the conditions of satisfaction or part of the conditions of satisfaction of the intentional state.” (Searle 1991a: 337)

and that matches the definition given in *Intentionality* (Searle 1983: 122).

Second, the propositional content given in an explanation of human behavior must “be identical with the propositional content in the actual mind of the agent or agents” whose behavior is in question (Searle 1991a: 337). Human behavior, according to Searle, must be explained in terms of what the agents want and their actions to achieve those goals given their beliefs.

Third, the social phenomena investigated by the social sciences only exist because agents believe they exist (Searle 1991a: 339). They are self-referential on this point.

Those points may better explain Searle's conclusions in *Minds, Brains and Science* (1985: 82-85). On his account, the social sciences are about intentionality. An economist makes assumptions about the intentions of the agents and works out the consequences. He acknowledges that the assumptions can be overridden by facts, such as when a well-proven theory suddenly does not match with reality. The linguistic goal of describing a complete set of rules for all human languages is on his account simply research in intentionality – namely what speakers historically had in mind when speaking.

II

Let us now turn to examine some objections to Searle's argument given above.

Kincaid (1990: 59) raises the objection that it is either invalid or unsound. It depends on how “systematic connection is read. To understand his objection, his sketch of Searle's argument has to be given:

1. *“Social kinds have indefinitely many physical realizations.*
2. *When a kind has indefinitely many physical realizations. It has no systematic connection to the physical.*
3. *If a kind is not systematically connected to the physical, it cannot support genuine laws.*
4. *Thus social kinds cannot support genuine laws.” (Kincaid 1990: 59)*

If the systematic connection is read as a law-like (type-type connectability, as D'Amico (1997) says) connection between social and physical phenomena premise 3 is, according to Kincaid, implausible, because it would rule out some laws of the natural sciences, such as the concept of fitness in evolutionary biology. Yet if it is read as mere supervenience¹, premise 2 must be wrong, because, says, Kincaid, supervenience would not rule out indefinitely many realizations.

Yet, as D'Amico (1997: 314-319) rightly points out, this objection is highly problematic. By substituting “kind” for “phenomena”, he writes, Kincaid gets an entirely different argument. By bringing in the wording of “kind”, Kincaid would introduce all the problems associated with the notion of “natural kind”. On top of that, Kincaid would in premise 2 only speak of “kind” instead of “phenomena described in social terms”. When giving the correct argument, D'Amico argues, the problems Kincaid raises do not hold since the premise “If phenomena described in social terms have no type-type connectability to the physical, they cannot support genuine laws” would not rule out biological laws. “When phenomena described in social terms have indefinitely many physical realizations, they do not strongly supervene on the physical” would not imply that any kind of multiple realization rules out a systematic connection to the physical.

¹ Defined by Kincaid (1990: 59) as „once all the physical facts are set, so are the social facts“.

How then to argue against Searle? D'Amico (1997: 319-324) suggests a different strategy. According to him, Searle claims that the intentional states could not be systematically connected to the physical phenomena because the sensations that partly constitute them cannot be reduced – since, as Searle (1985: 80) writes, “money can have an indefinite range of stimulus effects on our nervous system”. Therefore Searle concludes it “would be [...] a miracle if they all produced exactly the same neuro-physiological effect on the brain”. Yet, D'Amico (1997: 323) objects this is not a problem, because money is not defined by how money looks but by the concept of money. This belief could in turn be systematically realized physically. According to D'Amico all Searle offers is trading the mystery of multiple physical stimuli with the mystery of particles “blowing in the right direction” in intentional causation – which, in turn, would have to be realized in neurophysiology. This connection is not defined clearly by Searle – the mind “just does it right”. D'Amico does not accept this as a suitable solution because it would suggest that regularities in social phenomena are inexplicable. He suggests, as a way out of the mystery, that “mental causation is epiphenomenal with respect to social phenomena” and laws of the social science “would have to exclude intentional states” (D'Amico 1997: 324). This, of course, is incompatible with Searle's other philosophical commitments – which seems to D'Amico that either part of Searle's philosophy must be wrong and suggests that he has not shown that even loose connections between the mental and the physical realm with regard to the social phenomena is impossible.

In 2011, D'Amico, together with William Butchard, brought forth another objection. They look into the systematic connection Searle sees as necessary for scientific laws. Butchard and D'Amico's (2011: 457) reading of that term is that “there must be *correlations* between the instantiation of the social phenomena and the instantiation of the physical phenomena, and those correlations must explain why two sets of laws make the same predictions”. Now, they argue, it would seem implausible if there would be causal connections between the physical features of money and its monetary features (461). But for Searle, “people count the object as an instance of the social phenomenon by applying what Searle calls constitutive rules” (Butchard / D'Amico 2011: 465) that take the form of *X counts as Y* in context *C* – they suggest “Having a cold *counts as* being sick” as an example. But, they argue, this claim is equivalent to “Something can be sick *in virtue of* having a cold” (Butchard / D'Amico 2011: 465). Both locutions carry a logical necessity and an explanatory force – an explanation that is not causal, but metaphysical. This explanation means that “saying that a person's being sick is *nothing over and above* her having a cold” – the explanation takes the form of “*Y is nothing over and above X*”.

If a society now applies this rule, it constitutes a fact. In other words, X in context C is Y in virtue of that collective acceptance. This *in virtue of* generalization, they argue, is suitable for a bridge principle. If we accept such generalizations as bridge principles, the open-endedness of social phenomena does not constitute an argument against laws in the social sciences (466). Or, as they put it later: In a given embodiment of, say, money, there are “physical regularities that play a role in fixing (qua embodiment) the monetary regularities” (467). This explains why both sets of laws can predict and explain the same events: “The social-scientific laws are nothing over and above the physical laws together with our decision to treat certain things as money.” (Butchard / D’Amico 2011: 468). To put their objection in short terms: Money counts as money because the collective stance a society has towards its physical features. It is money *in virtue of* the collective attitude towards it.

Later, they (Butchard / D’Amico 2012: 448)² further explain that they do believe that the attitudes taken towards a phenomenon are underwritten by brain states. If the attitude changes, the phenomena would also change and some particular instance of money would cease to exist. With reference to brain states they say that the physical laws and conditions that explain and predict social phenomena would have to “secure the brain states that accompany our attitudes”.

Now their explanation of how their account could work is somewhat obscure. They suggest the following example that they say is very common in economics:

“Assuming for the moment that there were economic laws, economists could proceed as follows: “Imagine an economy A of such and such a size with such and such productivity. Now further imagine that its currency has a fixed or pegged exchange rate to the currency of economy B of such and such size and with such and such productivity. Under these conditions and given these economic laws, the rate of exchange would produce a rate of inflation in economy A of such and such.”(Butchard / D’Amico 2012: 448)

² This article is a reply to Weber’s (2012) and will be omitted here because, as Butchard and D’Amico (2012: 446) rightly state, he fails to accurately describe their views and therefore cannot accurately object to them.

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It seems they talk about *ceteris paribus* laws. They forbid any criticism on that point because it would forbid those kinds of laws in any science. Kincaid (e.g. 1990: 70) would certainly agree on this point. He argues that the physical sciences also rely on *ceteris paribus* laws. This raises the question if Searle accurately grasps the social sciences – a question that will be considered in the next part.

Those two objections could be condensed into one: Since social phenomena are in a large part defined by the concepts that constitute them, those concepts might be taken as regularities and be described in *ceteris paribus* laws. This solution seems to be better than Searle's not yet well defined concept of intentional causation.

So what to make of all those objections? It seems D'Amico (1997) is right in criticizing Kincaid's (1990) objection to Searle. But his own objections, in (1997) and together with Butchard in (2011) are rather unclear and can only be understood with some interpretation. On the interpretation given in this paper, they both are comparably strong. In answering them, Searle could argue that their view of his claims is not correct. Particularly, they claim, as evidenced in (Butchard / D'Amico 2012: 446), that he argues that there should be physical features that all money has in common for there to be physics-like laws of money. He, in turn, could answer that it is the perception of money that is important, not its features. Now there is nothing in his writing that supports either version. But this would not solve the problem of *ceteris paribus* laws. It seems unclear if Searle argues against them. One could read his suggestions for economics in (Searle 1984: 82-84) as *ceteris paribus* laws. Yet he also clearly asks for physics-like laws in the social science (for example in Searle 1984: 75) and his understanding of them seems to be that of exact laws. It would be more promising for Searle to ask for physical reduction instead of *in virtue of* explanations – since those are not in accordance with his view of the physical laws.

So Searle's claims do indeed rely on his account of science. But it seems to me that Searle's view of the sciences and the social sciences in particular is somewhat obscure. This very topic will be addressed in the next part.

III

Searle's account of scientific laws seems to be a simple "if a then b" causal relation with the added twist that there have to be micro and macro level laws that predict exactly the same outcome. Of course it is only necessary that such a set of laws for a given phenomena is possible – Searle would most probably not claim that meteorology is not a science because it has not yet discovered all the relevant mechanisms. It is the mere possibility that can be seen as a demarcation of the natural and the social sciences.

But this account is highly problematic. It might be questioned if this claim is indeed necessary. I will suggest that it is a feature of many natural sciences – including physics –, and that the social science do not rely on it. Effectively, I will argue against premise 1 of Searle's argument sketched above: "For there to be scientific laws, a systematic correlation between the higher and lower levels of a phenomenon is needed."

The problem is that it is highly questionable if those systematic correlations exist in every explanation in the natural sciences.

Before digging into it, it must be remarked that I will, for the sake of brevity, use the terms "*ceteris paribus* laws" and "models" as interchangeable, which is of course not accurate and ignores a wide range of philosophical implications that are not of interest for the question at hand. The usage of the terms will be according to the cited authors, and I will use "models" for my considerations.

Kincaid (1990: 76-78) suggests ecology as an example. If manipulation in the laboratory or in the field is not possible, it relies on observations in the field and the data it can get out of observing. That data is then manipulated with the same statistical tools as are common in the social sciences. From those studies "law-like claims" are extracted that often only hold *ceteris paribus*. Some of them only hold in one ecological community, others only in a specific temporal range. Many have exceptions. Some can specify the actual counteracting influences, others cannot. Chandler (1988: 27-28) suggests evolutionary biology as an example: It includes models of population genetics that can mathematically explain the diffusion of individual species while ignoring mutation and the environment, models of changes in the geophysical environment and models of the cosmic history that can explain some mutations. Taken together, those models cannot predict, but explain the development of, say, the giraffe.

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It can easily be seen that this description holds for examples in the social sciences – surely for economics, but also for the political sciences or sociology. Kincaid (1990: 77-78) suggests conclusions from anthropology and economy about cultural and economic development. Another example is the outcome of presidential elections in the United States that are predictable by models that look into the economic situation of the country (e.g. Erikson 1989, an example Searle could be aware of). Social scientists nowadays can produce models that have explanatory force. Maybe they do not hold in all settings – for example, rational choice theories of electoral behavior such as (Erikson 1989) have proven to be false for Switzerland. Schloeth (1998: 128, 230-234), for example, rejects both that voters who are afraid of unemployment and voters who perceive the economical conditions as bad vote for the opposition – two hypotheses that have proven to be true for in the post-World War II United States. On the other hand, there is no indication that they will always be true for the U.S. They carry explanatory and predictive force, but only in a spatial and temporal context.

It is important to note that both examples do not rely on micro-level explanations. They explain development and voting, respectively, from social phenomena and some assumptions and data about individual behavior without accurately grasping – or even being able to accurately grasp – the individual intentions that underlie the behavior. They simply do not need them. They make claims about changes in behavior *on average* without the need to explain every voter's or every society's member's behavior.

Taken together, those examples are a problem for Searle. They clearly suggest that what he expects from the social sciences, that is: the sort success the natural sciences had (Searle 1991a: 336) is clearly possible in the social sciences. Searle's argument is problematic in the cases highlighted above. His argument relies on the claim in premise 1, that the higher and lower levels of a phenomenon need to systematically correlate. But we can actually produce accurate models of human behavior on the macro level.

Searle could simply deny that those models are laws or law-like. But that would not accurately match the picture modern science gives us. The above mentioned examples from biology clearly suggest that, in some cases, we do not get Searlian laws yet are still able to explain and, sometimes, predict. Yet the models often only hold *ceteris paribus*.

The same holds true for the social sciences. Many, if not all, of its effects are intertwined with others, and to model such an effect can only hold *ceteris paribus*. Searle is faced with a dilemma: Either he rejects the law-ness or law-likeness of those cases from biology and

other natural sciences, or he expands his definition of scientific laws. Either way poses a problem for his argument. In the first case, he needs to exclude parts of the natural sciences from his definition; in the latter his whole argument would fall.

Now, Searle might object that there is another difference that, on an empirical level, shows that my argument is not quite correct. He might say that the social sciences produce a wide range of theories that are competing and can therefore not give an accurate description of reality with their laws, which is not the case for biology and the like.

I would respond to this objection with Chandler (1988). She argues that two famous models of voting behavior are not incompatible, but like the above mentioned models in evolutionary biology, simply two theories that describe the same phenomena but make different assumptions and rely on different variables (Chandler 1988: 28). But no theory that embodies both could be built since they are too different. Yet it is not necessary that both of them cannot hold at the same time.

IV

Much has been said about how the social sciences presumably work from an armchair perspective. But to say it with Kincaid (1990: 81):

“[P]hilosophers will have to dirty their hands with real empirical data. Gone are the days when philosophers can declare on simple methodological or conceptual grounds that entire domains of painstaking research are unscientific.”

I will therefore now test this argument and look at how theory and research in the social sciences is actually performed.

How do social scientists explain? Take, for example, Esser (1993), who theorizes that the phenomenon is explained by giving its causes (40). This is performed by stating the general laws that entail the causes and effects in question and by stating the initial conditions.

These describe that the causes are in fact present (41). Esser's explanation seems to be in line with Kincaid's (1990: 72) test for *ceteris paribus* laws: Esser's laws can be tested, and they have room for other conditions that can be taken into account when analyzing results.

Let's now turn to some actual research. Schloeth (1998), for example, could be described as establishing a model of voting in Switzerland based on rational choice theories. It is not a mathematical model, yet it gives three empirically testable hypotheses: That (1)

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the fear of unemployment, (2) a bad perception of economic outlook and (3) a bad perception of an individual's own economic outlook all raise the tendency for the (real or perceived) opposition (Schloeth 1998: 127-128). The model is fairly clear and it can easily be tested. Yet the empirical data suggests it is empirically false (231-236).

To put forth another example, consider Lachat and Selb's (2010). They try to model Swiss voting behavior by so-called spatial voting models, particularly compensatory voting that suggests that voters, in a multi-party system such as Switzerland, actually may not vote for the party they prefer but for one that ensures their preferred party is going to be a member of the government and/or that their preferred policies can be implemented (Lachat / Selb 2010: 483). They present a mathematical model that predicts the utility a voter has from voting for a specific party (487) and operationalize their formula into an empirically testable model that takes into account possible counterforces (489). The empirical test shows that their model is far from perfect (494), but nevertheless is an interesting model for further research.

Both examples show that research is not as simple as Kincaid's "armchair philosopher" expects. Yet both are valuable scientific studies. They will help to ultimately secure social-scientific "laws" by falsifying theories and models. Yet if the models were correct and understood as laws they would unquestionably be *ceteris paribus* laws. And they would actually be able to predict elections right now in Switzerland.

To conclude the last two chapters, we have seen that Searle's account of the social sciences is flawed because it does not accurately reflect how science in general and the social sciences in particular work. Revisiting his initial description of the social sciences, it seems that he, in some sense, misses the point, yet in another sketches something very viable. We have so far not talked about social scientific research that matches his description. Yet that clearly exists. Qualitative research seems to, at least superficially, fulfill his suggestions. It tries to grasp the intentions, beliefs and reasons of its subjects.

But social scientific research can work otherwise. We can look into human behavior on a macro-level and model *ceteris paribus* laws that actually hold true, at least, but not always, in a given spatio-temporal context. They are problematic for Searle because they do

actually explain and predict, as do “classical” scientific laws in the natural sciences. Furthermore, such laws also exist in the natural sciences, which poses another problem for him, since they are clearly not included in Searle's definition of scientific laws.

On the other hand, accounts of the social sciences put forth, for example, by Kincaid (1990) do actually work. They can grasp the work of social scientists, as showed by a look into actual research. Scientists do work with *ceteris paribus* laws, and they actually produce results that give a promising outlook on the future of the social sciences.

V

We have seen that Searle's argument against laws in the social sciences is very problematic – various objections can be raised that Searle can not easily reject. Additionally, there seems to be a problem with the Searlian conception of Science and scientific laws. He suggests that the social sciences should produce a “payoff in the study of human behavior that [the scientific methods] had in physics and chemistry” (Searle 1985: 71). Yet we do have *some* pay-off. We do have models that explain voting behavior in a number of countries, and we can use those models in election campaigns. We do have economical models that explain economic growth and that actually lead economic policy.

Searle would do good if he went out and read actual social-scientific research comparing them to research in the natural sciences. But even that would not help. His view of the sciences seems to be focused on the successes of science, as is suggested by his use of the word “payoff”.

Yet maybe Karl Popper was not entirely wrong when he tried to shift the emphasis on falsifying theories and hypotheses only to end up with true theories, or theories that have a high verisimilitude. Maybe the social sciences would profit from a view that would value wrongness as progress. As Kincaid (1990: 79-81) rightly notes, there are some problems within the social sciences that might slow them down. But there is nothing that actually hinders them from achieving the “payoff in the study of human behavior that [the scientific methods] had in physics and chemistry” (Searle 1985: 71).

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